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# The end of the great inversion: offshore national banks and the global financial crisis

Daniel Haberly<sup>\*,†</sup> and Dariusz Wójcik<sup>\*\*</sup>

<sup>\*</sup>University of Sussex, School of Global Studies, Department of Geography, Arts C Building, Arts Road, Falmer, Brighton, BN1 9SJ

<sup>\*\*</sup>University of Oxford, School of Geography and the Environment and St. Peter's College, Oxford Centre for the Environment, South Parks Road, Oxford, OX1 3QY

<sup>†</sup>Correspondence to: email <d.haberly@sussex.ac.uk>

## Abstract

Here we present a novel analysis of the geographic evolution of international banking since 1980, which addresses still unanswered questions about the role of offshore centers in the global financial crisis, and the post-crisis stability of these centers. We show that post-1980 regulatory shifts prompted a 'Great Inversion' of offshore banking, wherein conventional Euromarket activity was partially overshadowed by the growth of European 'midshore' center national banks. As a result, offshore jurisdictions (i) were likely more responsible for pre-crisis regulatory failures in a home than host regulator capacity and (ii) internalized far greater domestic fiscal risks than in previous crises.

**Keywords:** Offshore financial centers, banking regulation, global financial crisis, Eurozone crisis, lender of last resort, Basel framework

**JEL classifications:** F34, G28, H81

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## 1. Introduction

Offshore financial centers are typically discussed in relation to their negative impacts on other economies. These include depriving states of tax revenues, enabling illicit financial activities and corruption, undermining global financial regulation and stability, and instigating a 'race-to-the-bottom' that grinds down international standards in all of these areas (Palan et al., 2010; Shaxson, 2011). Recently, however, work on the so-called 'finance curse' has focused attention on the negative impacts of international finance-led development on offshore states themselves—keeping in mind that the most important of these have never been tropical 'small islands', but rather European countries such as the UK, Switzerland, Luxembourg, the Netherlands, Ireland or Cyprus, or in some contexts US states such as Delaware (Shaxson and Christensen, 2013; Christensen et al. 2016). As highlighted by the global financial and Eurozone crises, the most terrifying scenario faced by these states is the prospect of finding themselves fiscally liable for some portion of the vast financial 'casino' intermediated through their borders (Shaxson and Christensen, 2013). In cases such as Ireland and Cyprus, the economic and social consequences of this have been disastrous (Donovan and Murphy, 2013; Michaelides, 2014). Meanwhile, Iceland has only avoided similar consequences by repudiating its banks' debts and

disconnecting itself from the global financial system (Baldursson and Portes, 2014). Even in the UK, the state's exposure to failing financial institutions prompted less-than-outlandish crisis concerns of a 'Reykjavik-on-Thames' (The Economist, 2009).

There is a voluminous body of case study work examining the national historical pathways—particularly of political and economic capture—that led to disaster in specific offshore banking centers (e.g. Aliber and Zoega, 2011; Connor et al. 2012; Donovan and Murphy, 2013; Baldursson and Portes, 2014; Michaelides, 2014; Christensen et al. 2016). However, the growing tendency for offshore jurisdictions to become part of the collateral damage from their own activities also raises puzzling questions about the multi-decadal evolution of offshore banking from a broader global structural standpoint. Offshore centers have been a prominent feature of global finance for more than half a century, during which time they have frequently played a role in generating financial and debt crises whose effects are felt elsewhere—most notably the Euromarket-centered early 1980s Less-Developed Country (LDC) debt crisis (Strange, 1994), which left decades of economic devastation in its wake for much of the developing world. However, it is only recently that they have begun to violently self-destruct. The key question is what underlying global processes—if any—have led to this change? Have these countries simply been swept up in some overarching tendency toward 'financialization' (Epstein, 2005; O Riain, 2012; Raza et al., 2016), both onshore and offshore, that has raised the stakes of hosting financial activities in general, or are they victims of some more specific shift in the architecture of global finance?

The remainder of this article is divided into four sections, which provide a novel account of the global structural evolution of offshore banking from the 1980s to the global financial crisis—contributing to an expanding body of work on the offshore legal–political geography of finance (Roberts, 1994; Hudson, 2000; Warf, 2000; Bassens et al. 2013; Wójcik, 2013a; Coe et al. 2014; Dörry, 2014; Cobham et al. 2015; Haberly and I Wójcik, 2015, 2017; Hall, 2018). As we demonstrate, Ireland, Iceland and Cyprus were the most acute casualties of a global structural shift in offshore banking that occurred between the early-1980s and early-2000s. As shown in Section 2, prior to this structural shift, the growth of offshore banking centers had been primarily driven by the local deposit taking and lending activities of foreign banks in the Euromarket. As these banks were back-stopped by their home states 'onshore', this system posed little risk to offshore host states. From the 1980s, however, widespread onshore deregulation undermined the relative regulatory advantages of the Euromarket. Meanwhile, the growing importance of home-state consolidated capital supervision encouraged the rise of 'shadow banking'-based strategies of bank regulatory arbitrage—wherein the regulatory significance of on/off-balance sheet increasingly superseded onshore/offshore in the traditional sense. Together, these changes produced a 2-fold shift in the geographic logic of offshore banking. On the one hand, 'small islands' (e.g. the Cayman Islands) increasingly shifted from hosting the deposit-taking and lending activities of foreign banks, to the off-balance sheet securitization vehicles of these banks. On the other hand, the fact that the regulatory arbitrage potential of these vehicles was primarily conditioned by the home state capital treatment of their sponsor banks, fostered the growth of a new axis of nationality-based international regulatory arbitrage. This entailed the use of international mergers and acquisitions—in a logic both paralleling and intersecting with that of corporate tax 'inversions'—to shift assets to the ownership of banks headquartered in states with relatively permissive capital regulators (and typically also lower corporate tax rates).

As we show in Section 3, this shift in assets to lightly taxed and regulated jurisdictions at the *home* state level—which we dub the ‘Great Inversion’—disproportionately encouraged the growth of the national banks of European ‘midshore’ banking centers such as the UK, Switzerland, the Netherlands, Belgium, Ireland and Iceland. All told, the growth of these countries’ banks involved, in market share terms, the geographic reallocation of roughly a quarter of total worldwide cross-border banking assets, on a home nationality basis, from the late 1980s to 2007 (and an even larger percentage of assets at the level of the world’s largest banks). Furthermore, European offshore national bank growth was disproportionately driven by entry into the riskiest ‘shadow banking’ activities implicated in the global financial crisis, wherein the total pre-crisis market share of these banks (most importantly British, Swiss, Dutch and Belgian) was only slightly less than the American banks that had invented these instruments. By the eve of the global financial crisis, the old offshore misalignment between bank nationality and bank territory of operation had been largely superseded by a new misalignment between the size of multinational banking groups, and the size of their home states’ economies—and in conjunction with this, between bank liability currency denomination, and home state central bank lender of last resort capacity. As we show in Section 4, this was inherently unstable in the event of a major financial shock, as the responsibility for backstopping the riskiest components of the international banking system was now disproportionately concentrated on small European states with a limited capability to fulfill this responsibility. In the wake of the global financial crisis, the major European offshore centers were thus forced to restore their national banks to health primarily by downsizing them, while trying (with varying levels of success) to minimize national fiscal, financial and economic disruption. The ‘Great Inversion’ thus rapidly unwound.

We conclude in Section 5 by suggesting that offshore banking centers may face a ‘political-geographic paradox’ that renders their development inherently unsustainable under either host or home-based regulation. Ironically, the only model of offshore that appears to navigate this paradox is a state capitalist one (e.g. as seen in Singapore or Hong Kong), which is stabilized by a combination of offshore state foreign currency reserve hoarding, and the direct participation of foreign state-owned financial institutions whose offshore activities are actively encouraged and sanctioned by their home state.

## 2. The 1980s international banking regulatory reconfiguration and the decline of the offshore Euromarket

The concepts of ‘offshore’ finance, and offshore financial center or jurisdiction, are notoriously resistant to neat definition. Particularly, challenging is the fact that analyses of ‘offshore’ problems such as corporate profit shifting, financial regulatory arbitrage or financial secrecy typically show that these are dominated by what can be described as large ‘midshore’ or ‘onshore-offshore’ jurisdictions, as opposed to the ‘small islands’ stereotypically associated with offshore. Well-known examples include the central role of Ireland, the Netherlands and (formerly) Belgium in corporate profit shifting, of Switzerland and particular US states in financial secrecy, and of London/the UK in the offshore Euromarket (Palan et al., 2010; Shaxson, 2011; Coe et al. 2014; Cobham et al. 2015). Further complicating matters definitionally is the fact that the logic of ‘offshore’ tax and regulatory arbitrage is a network-relational one that emerges through the interaction of laws in multiple ‘offshore’ and ‘onshore’ jurisdictions (Wójcik, 2013a; Coe et al., 2014; Dörny, 2014;

Seabrooke and Wigan, 2014; Haberly and Wójcik, 2015). For example, a country that serves as a tax haven from the standpoint of American multinational firms—e.g. the UK or Canada prior to the 2017 US tax reform—might not be considered such from standpoint of other countries.

With this ambiguity in mind, the understanding of offshore employed here is a substantive one that focuses on the presence of geographic ‘misalignments’ in international finance that are attributable to international tax and regulatory arbitrage. There are two basic geometries that these misalignments can take. The first, and most common geometry, is that of territorial misalignment according to a logic of host-based arbitrage—i.e. offshore jurisdictions attracting activities on a nominal territorial (booking basis) by offering local tax and regulatory advantages to foreigners. However, in many contexts, one also finds an ‘inverted’ offshore geometry of nationality-based misalignment, shaped by home-based jurisdictional arbitrage—i.e. the granting of tax and regulatory advantage to firms that are locally headquartered or incorporated at the parent company level.<sup>1</sup>

The practical distinction between the ‘classic’ territorial and the ‘inverted’ nationality-based geometries of offshore misalignment is sometimes ambiguous—for example, in the context of many US corporate tax inversions that involve a shift in parent company incorporation jurisdiction, but not in operational headquarters (Marian, 2015). However, which offshore geometry is employed sometimes has important ramifications for firm treatment or behavior—most importantly insofar as the nationality of firms impacts their relationships with states as providers of sovereign ‘protection’, as broadly defined (see Tilly, 1985). Notably, this issue has reared its head even in cases where there would seem to be little question about a firm’s substantive, as opposed to formal legal nationality. US-headquartered Broadcom, for example, which had inverted to Singaporean domiciliation in 2015, was in 2018 forced to return to US domiciliation to avoid being subjected to CFIUS scrutiny as a ‘foreign’ acquirer of American technology firms (Swamynathan, 2018). Similarly, the fact that most Chinese information technology firms are organized via ‘inverted’ corporate holding structures—wherein the parent company is incorporated in the Caribbean (e.g. Cayman Islands)—forces most to use legally questionable variable interest entity structures to control their own subsidiaries in strategically sensitive sectors where ‘foreign’ ownership is banned (The Economist, 2017).

Ultimately, it is in finance that the relationship between firm nationality and sovereign ‘protection’ is perhaps most critical. This is particularly true for banking, which is arguably more dependent on state backing than any other sector (Ferri and Minsky, 1992). The responsibility for backstopping international banks is, in general, assigned to various states more through messy *de facto* practice than formal statute or agreement. However, it is typically the bank home state—i.e. the state where an international banking group is headquartered—that bears *de facto* responsibility for ‘bailing out’ banks with fundamental solvency problems. Meanwhile, responsibility for short-term liquidity support is typically assigned to various central banks according to a combination of host territorial and currency denomination basis (Herring, 2007). Sovereign liabilities potentially rest with many states in this arrangement. However, the typical assumption is that the risks borne by

1 In essence, the distinction between the ‘territorial’ and ‘inverted’ modes of offshore misalignment here can be framed by extending the Dunning OLI framework to tax and regulatory arbitrage, with ‘inverted’ and ‘territorial’ misalignments, respectively, driven by ‘ownership’ (i.e. parent company level) and ‘location’ (i.e. host jurisdiction)-based tax and regulatory advantage. ‘Inverted/inversion’ here encompasses, but is somewhat broader than, reference to classic corporate offshore ‘tax inversions’.

central bank providers of liquidity support are underwritten, in the final analysis, by the home states standing behind bank solvency.

This *de facto* allocation of bank solvency backstopping responsibility poses potentially enormous fiscal risks for any small state home to disproportionately large international banks. Until the 1990s, however, this problem was mostly hypothetical, as, apart from, in Switzerland, local banks were not usually the key players in offshore banking. Crucially, moreover, Swiss banks mostly attracted clients by providing secrecy for (prudentially) low-risk wealth management activities, rather than by leveraging regulatory advantages—thus limiting the risks they posed to Swiss taxpayers.<sup>2</sup>

Meanwhile, the principal locus of offshore banking *regulatory* arbitrage was, until the 1980s, the Euromarket. This allowed banks to free themselves from regulations in their own home countries (primarily reserve requirements, interest rate caps and capital controls) by operating or booking activities offshore in a host-based territorial sense (Hampton, 1996). From the standpoint of offshore host states themselves, a critical attraction of this arrangement was the potential that it afforded to ‘ring fence’ the unregulated offshore sector—and the financial and fiscal risks that it generated—from the domestic financial system. Indeed, this logic of ring-fencing was at the heart of the prototypical Euromarket developed by the UK. Shaxson (2011, 97) describes it:

A bizarre Alice in Wonderland logic lay behind the Bank of England’s decision not to regulate these markets... If there was a run on a regulated bank in London, the Bank of England, by virtue of being its regulator, would feel some obligation to come in and pick up the pieces... Better then, the logic went, not to regulate them.

This ‘Alice in Wonderland logic’ only worked if there were secure and credible barriers protecting the British economy (and taxpayers) from the potential liabilities associated with hosting the Euromarket. This entailed constructing two interconnected lines of defense. The first was currency denomination, with the Euromarket being limited to foreign currency activities, for which foreign central banks, rather than the Bank of England, would tend to act as lenders of last resort. Meanwhile, the second was bank nationality, with the major British clearing (i.e. commercial) banks—which the Bank of England (and potentially British taxpayers) would inevitably need to backstop in a crisis—being subjected to reserve requirements and interest rate caps from which foreign banks were exempt. British merchant (investment) banks were more lightly but not wholly unregulated (Hampton, 1996; Shaxson, 2011).

The flip side of this logic of ring-fencing in the Euromarket was an externalization of sovereign backstopping liability to the foreign home states of the banks operating in this market. In practice, this disproportionately concentrated risks in US hands, both via the Federal Reserve’s *de facto* role as a global lender of last resort for dollar-denominated banking activities (in or outside of the USA), and the status of the USA as home state for the banks conducting the largest share of Euromarket operations (Kapstein, 1991). Ultimately, the risks created by the explosion of unregulated Euromarket deposit-taking and lending in the 1960s and 1970s would hit home in the USA in the form of the LDC debt and US banking crises of the early 1980s, both of which had their roots largely in the proliferation of risky Euromarket financing structures (Strange, 1994; Curry, 1997;

2 As described by Guex (2000), Swiss banking secrecy developed as a political compromise wherein banks were granted ironclad guarantees of client confidentiality in exchange for submitting to tightened prudential supervision.

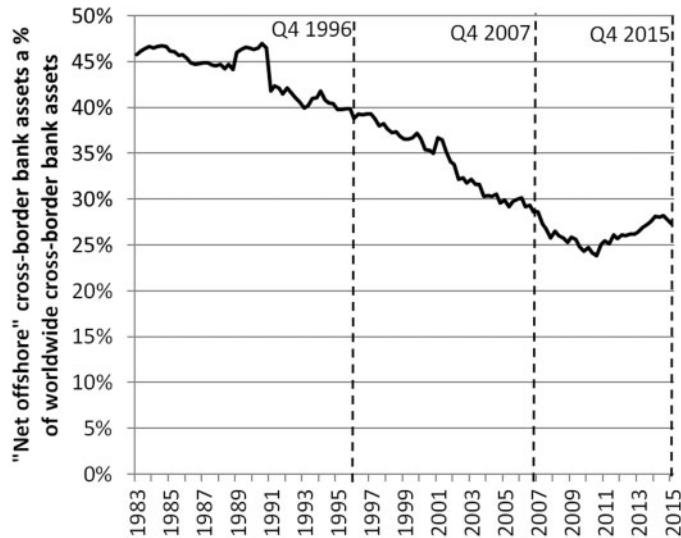
Davison, 1997). In relation to the LDC sovereign debt crisis, US taxpayer assistance to the US creditor banks of developing countries was primarily delivered indirectly, via the US role in bailing out LDC debtor states (Curry, 1997). In the case of Continental Illinois, however, solvency problems at one of the largest US banks stemmed from its use of risky Euromarket wholesale financing to fund US domestic, rather than overseas lending, and the Federal government was forced to directly rescue the bank. This incident famously led to the coining of the term ‘too big to fail’ (Davison, 1997).

The declining effectiveness of traditional regulatory instruments, in the face of growing Euromarket arbitrage, prompted two, somewhat contradictory regulatory responses by ‘on-shore’ states—and in particular the USA. First, the fact the Euromarket had already undermined the effectiveness of ‘onshore’ regulations, even while stealing business away from onshore banking centers such as New York, strengthened the political hand of those calling for financial deregulation. Combined with the ascendance of neoliberal ideology, this helped to drive a US-led international regulatory ‘race-to-the-bottom’—originally through the development of limited onshore–offshore spaces, such as the New York International Banking Facilities and Japan Offshore Market, and eventually through widespread abandonment or relaxation of capital controls, interest rate caps and reserve requirements (Roberts, 1994; Shaxson, 2011).

Crucially, however, the problem of international bank home state taxpayers being forced to underwrite the costs of bank misbehavior—even when it occurred overseas—did not go unaddressed. The result, paradoxically, was that a far-reaching international project of banking reregulation, coordinated via the Basel Concordats and Accords, gathered strength simultaneously within the broader context of international banking deregulation. The most important principle established by Basel was that of consolidated home state supervision of international bank capitalization—or loss absorbing potential—wherein states force their nationally headquartered banks to internalize the costs of building loss-absorbing buffers for all of their activities, regardless of where they occur. The spread of home state capital supervision had occurred incrementally from the mid-1970s to early 1980s, both through national efforts, and multilaterally via the Basel Committee (see Kapstein, 1991; Herring, 2007). However, the costs imposed on US taxpayers by the LDC and Continental Illinois bailouts prompted the USA to leverage its political clout to push for an international strengthening and harmonization of home state capital supervision—culminating in the 1988 Basel Accord (Kapstein, 1991).

The international banking regulatory landscape that emerged in the 1980s thus differed from the pre-1980s landscape in ways that directly undermined the traditional Euromarket. Due to widespread onshore deregulation, the regulatory advantages of offshore Euromarket deposit-taking were reduced. Meanwhile, regulatory arbitrage became increasingly targeted at home state capital rules—particularly via the use of securitized ‘shadow banking’ instruments to move assets off-balance sheet (or otherwise reduce capital charges; Pozsar et al., 2012).

The negative impact that this international regulatory reconfiguration had on the Euromarket centers (including the UK) as sites for the booking of the conventional, *on-balance sheet* activities of foreign banks, is shown in Figure 1. This shows the total global ‘net offshore’ cross-border banking misalignment from 1983 to 2015 as a share of world-wide cross-border banking activity—with ‘net offshore’ defined as cross-border bank assets by residence, minus cross-border bank assets by nationality, summed across all jurisdictions for which the former was larger than the latter in a particular year (with data from BIS locational banking statistics). This is divided by the total global value of all



**Figure 1.** Aggregate ‘net offshore’ banking alignments (cross-border assets by residence minus cross-border assets by nationality) of all BIS reporting jurisdictions with a net offshore position (in that quarter), as a percentage of worldwide cross-border bank assets, 1983–2015.

*Source:* BIS locational banking statistics.

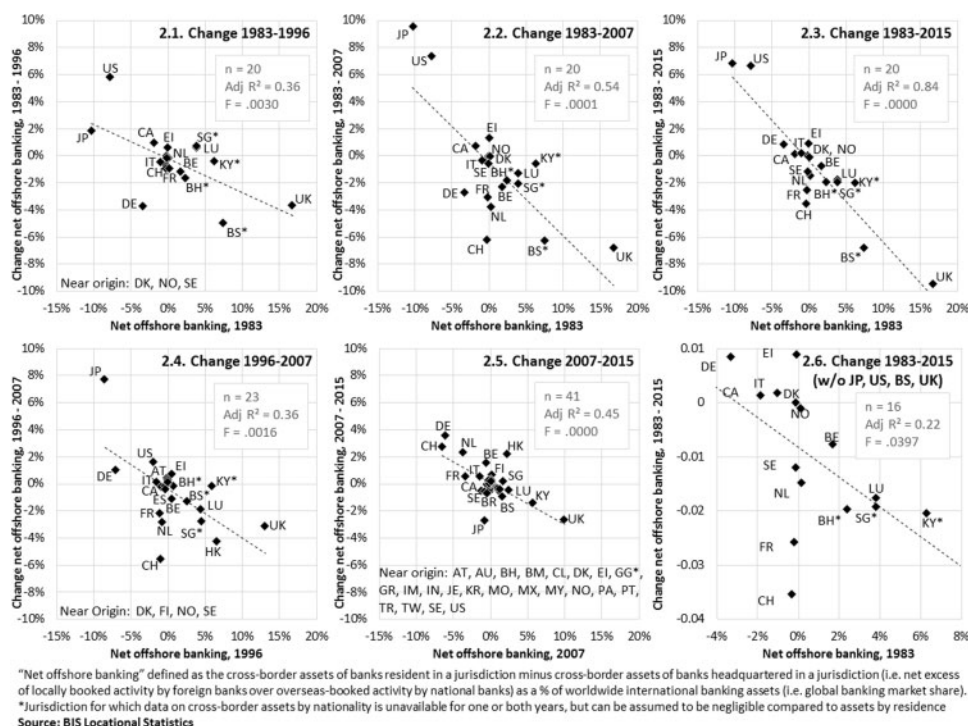
cross-border bank assets in that year, providing a measure of the share of international banking activity that has been shifted (in net) to jurisdictions that serve as booking centers for foreign banks. As can be seen, the total net worldwide mismatch between where banks are headquartered, and where they book their cross-border assets, dropped from nearly half of all cross-border banking activity in the early 1980s, to less than a quarter of cross-border banking activity by the global financial crisis. Furthermore, as illustrated in Figure 2, there is a strongly negative relationship at the individual jurisdiction level between initial net offshore misalignment and subsequent change in net offshore misalignment (over both the entire 1983–2015 period, and the three sub-periods 1983–1996, 1996–2007 and 2007–2015 also marked in Figure 1<sup>3</sup>). Just as striking is the rebalancing at the ‘onshore’ pole. Most notably, between 1983 and 2015, net offshore booked cross-border lending by American and Japanese banks fell from 74% to 21% of the value of cross-border lending conducted directly from the USA and Japan. This underscores the declining advantages for banks of conducting international operations from offshore platforms, as opposed to directly from their home countries.

### 3. Home state-level international tax and regulatory arbitrage and the rise of European offshore national banks: 1988–2007

This relative decline in the conventional Euromarket did not imply a decline in the importance of offshore banking as more broadly defined. Rather, the post-1980 regulatory

3 Q4 1983 is the first year the BIS reports bank positions by nationality. Q4 1996 and Q4 2007 are chosen as intermediate dates due to their being the first year with data on Hong Kong positions by nationality, and eve of the global financial crisis.





**Figure 2.** Initial net offshore bank assets by jurisdiction (as a percent of worldwide cross-border bank assets) as a predictor of change in net offshore bank assets, 1983–2015. Countries labeled by ISO code. ‘Net offshore banking’ defines as the cross-border assets of banks resident in a jurisdiction minus cross-border assets of banks headquartered in a jurisdiction (i.e. net excess of locally booked activity by foreign banks over overseas-booked activity by national banks) as a percent of worldwide international banking assets (i.e. global banking market share).

\*Jurisdiction for which data on cross-border assets by nationality is unavailable for one or both years, but can be assumed to be negligible compared to assets by residents.

Source: BIS Location Statistics.

reconfiguration encouraged a corresponding reconfiguration of the geographic logic of offshore banking, which became, in the lead-up to the global financial crisis, increasingly shaped by the new logic of securitized shadow banking arbitrage.

First, as described in detail in Haberly and Wójcik (2017), even as offshore ‘small islands’ declined in importance as hosts for conventional banking, they became increasingly important as hosts for securitization vehicles. Most Structured Investment Vehicles (SIVs) and Collateralized Debt Obligations (CDOs), for example, were issued from Cayman Islands vehicles (Palan et al., 2010; Haberly and Wójcik, 2017). Crucially, however, as described by Haberly and Wójcik (2017) and Wainwright (2011), the domiciliation of these vehicles in offshore ‘small islands’ was mostly motivated by tax rather than regulatory considerations. Principal regulatory responsibility for these vehicles was rather allocated to the home states of the multinational financial firms sponsoring them—with these vehicles being primarily designed to exploit gaps in home state consolidated capital treatment rules.

In theory, the harmonization of home capital rules by the Basel Accords should have left little scope for international capital regulatory competition on a sponsor bank

nationality basis. However, the fact that Basel was a non-binding ‘soft law’ project meant that there was in practice substantial international capital rule divergence. As described by Thiemann (2014), this divergence was to large extent not accidental. Rather, the fact that Basel established a new international norm of home state consolidated capital supervision—but not effective capital rule harmonization—meant that it empowered home states to leverage relatively lax capital treatment to support the global competitiveness of their own banks on a nationality basis. This entailed, in particular, fostering the ability of banks to sponsor the types of ‘state of the art’ securitized instruments that would ultimately generate the global financial crisis (Thiemann, 2014). The imperative to support national banks was particularly intense in Europe due to the pressure of the ‘American invasion’, and the competition and takeovers unleashed by the 1988 European Second Banking Directive (Larson et al., 2011). Beyond a permissive home state regulatory attitude, this encouraged governments to promote or at least allow, the formation of ever-larger national banking groups through mergers and acquisitions—both as a defensive measure against foreign takeovers, and as an aggressive measure to support bank internationalization (Epstein and Rhodes, 2016).

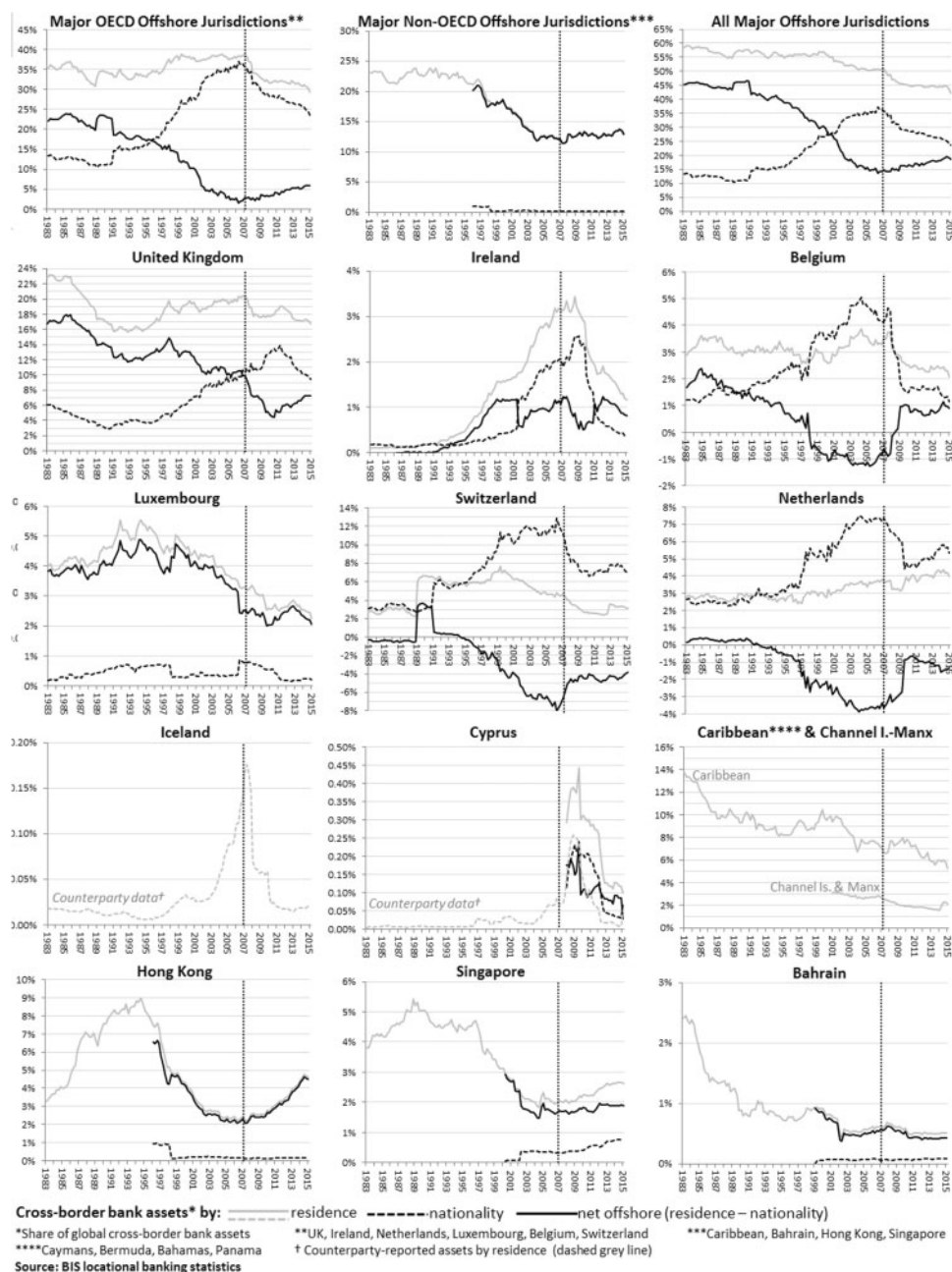
The pressure on home states to support the growth, consolidation and competitiveness of national banking sectors was widespread from the late 1980s to the global financial crisis. However, this pressure was particularly intense, politically, in what can be described as the large European ‘midshore’ financial centers.<sup>4</sup> The UK FSA, for example, blamed its inadequate pre-crisis supervision of British banks partly on ‘frequent political demands for it to avoid imposing ‘unnecessary’ burdens which could undermine the competitiveness of UK financial firms’ (p. 11) or ‘harm London’s competitiveness’ (p. 262) (FSA, 2011). Switzerland’s FINMA describes how concerns over the expansion of too-big-to-fail Swiss banks were overridden by the priority that regulation ‘not be allowed to jeopardise international competitiveness and Switzerland’s attractiveness as a business location’ (FINMA, 2009, 19). In the Netherlands, Engelen (2011) describes a pre-crisis regulatory and political ‘cognitive closure’, entailing a ‘seduction of politics by the promises of lucrative financial gains’, wherein ‘the Dutch Central Bank knowingly and willingly accommodated the ‘regulatory arbitrage’ of banks.’ (pp. 1790–1791). Notwithstanding the longstanding support of European ‘midshore’ centers for financial services, this permissive, and indeed boosterish attitude toward the rapid expansion and prudential risk-taking of *national* banks represented a fundamental shift. Indeed, as recently as the 1980s, Swiss banks, for example, were famously conservative prudentially, while the UK was actually the leading supporter of the US push for Basel capital rule harmonization, due to the UK’s desire to level the *home* regulatory playing field between British banks and their less stringently supervised onshore competitors (Hampton, 1996, 65).

The underpinnings of post-1980s national bank expansion in large European ‘midshore’ centers are examined in more detail in the discussion below. However, its results can be clearly seen in Figures 3–7, and Table 1—with the most striking bank growth trajectories visible for the UK, Switzerland, the Netherlands, Belgium, Ireland, Cyprus<sup>5</sup> and Iceland.<sup>6</sup> Figure 3 shows the international banking market shares of the most important offshore

4 Also see Christensen et al. (2016) and Shaxson and Christensen (2013).

5 Keeping in mind that Cyprus differs from these other countries insofar as it was mostly only a banking tax and secrecy haven, rather than regulatory haven (see Appendix A), with the failure of its banks stemming from holdings of Greek sovereign debt rather than involvement in risky areas of financial innovation.

6 As discussed below, Iceland was at this time both a corporate tax haven and a banking regulatory haven.



**Figure 3.** Cross-border bank assets of offshore jurisdictions by residence and nationality.

\*Share of global cross-border bank assets.

\*\*UK, Ireland, the Netherlands, Luxembourg, Belgium, Switzerland.

\*\*\*Caribbean, Bahrain, Hong Kong, Singapore.

\*\*\*\*Caymans, Bermuda, Bahamas, Panama.

† Counterparty-reported assets by residents (dashed gray line).

**Table 1.** Nationality of world's largest 20 banks by assets, 1980–2007

	1980			2002			2007			1980–2007		
	#	Asset %		#	Asset %		#	Asset %		#	Asset %	Asset % Chg.
France	4	26.0	Japan	13	68.9	Japan	4	22.6	UK	4	26.6	+17.6
Japan	6	24.0	France	4	18.5	USA	4	20.7	France	3	16.9	+8.6
Germ.	4	19.2	UK	2	8.2	UK	3	14	USA	3	14.6	+3.9 (+7.9) <sup>a</sup>
USA	3	18.4	Germ.	1	4.5	France	3	12.4	Switz.	2	8.6	+4.0
UK	2	9.0				Switz.	2	10.6	Germ.	1	7.9	+3.6
Brazil	1	3.4				Germ.	2	10.4	Japan	2	7.6	+3.2
						Neth.	2	9.2	Neth.	1	3.9 (7.9) <sup>a</sup>	+3.0
										(2) <sup>a</sup>		
									Italy	1	4.0	–3.4
									Spain	1	3.6	–3.8
									China	1	3.2	–9.1
									Belg.	1	3	–11.2
UK, CH	2	9.0	UK, CH	2	8.2	UK, CH,	7	33.8	UK, CH,	8	42.1	–16.4
NL, BE			NL, BE			NL, BE			NL, BE	(9) <sup>a</sup>		+33.1

<sup>a</sup>Figure in parentheses estimated value for Dutch national bank groups before RBS (UK), Fortis (BE) and Santander (ES) purchase of ABN Amro (NL) in late 2007.

Source: *The Banker*; Top 20 World Banks, 1980, *American Banker*, ranking the Banks 1991, Global Finance (2002–2007).

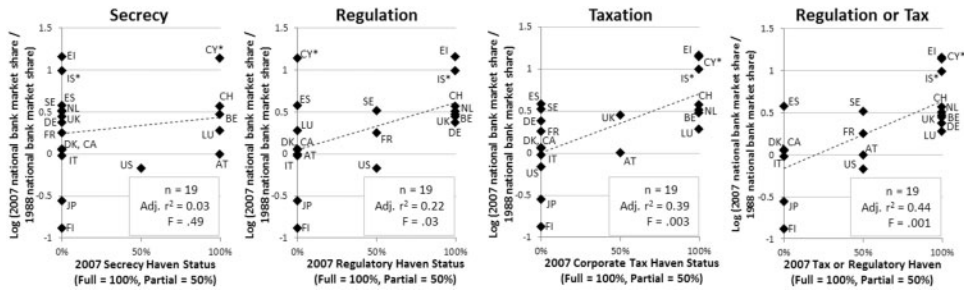


**Figure 4.** Change in total market share of cross-border European bank assets (by nationality), 1988–2007.

Source: BIS locational banking statistics.

(including European ‘midshore’) banking centers from 1983 to 2015, on a bank residence (host state), nationality (home state), and ‘net offshore’ (host state minus home state) basis. As can be seen, ‘net offshore’ cross-border booking by foreign banks (solid black lines) fell substantially (as a percent of total world international banking) in almost all offshore banking centers (both in and outside of Europe) between the 1980s and global financial crisis. However, the large European midshore centers simultaneously saw a rapid growth in the international market share of nationally headquartered banks (dashed black lines).<sup>7</sup> This growth began abruptly in the early-mid 1990s—following the implementation of Basel (1988–1992) and the European Second Banking Directive (1988–1993)—and continued until the global financial crisis, with the global cross-border banking market share of these countries’ national banks more than tripling from 11% to 36% between 1988 and 2007. Importantly, as shown in Figure 4, European offshore/midshore national banks also grabbed market share from their ‘onshore’ European peers, with Switzerland, the Netherlands, Ireland, and the UK in the lead. This confirms that their global market share growth was not simply an illusion created by Europe’s increasing weight in international banking (due to EU integration and Japanese bank decline).

<sup>7</sup> This raises a causality question surrounding the accounting identity between national bank market share and net offshore market share, as decreases in net offshore market share can be driven by either decreases in local booking by foreign banks, or increases in overseas booking by national banks. Regressing quarterly change in net offshore booking market share on quarterly change in national bank market share (for Q4 1983–Q4 2015) indicates that net offshore position changes are mostly driven by foreign bank booking for Switzerland ( $r^2 = 0.45$ ), Ireland ( $r^2 = 0.34$ ), the UK ( $r^2 = 0.26$ ), Luxembourg ( $r^2 = 0.19$ ) and OECD offshore jurisdictions collectively ( $r^2 = 0.39$ ). However, Belgian ( $r^2 = 0.55$ ) and Dutch ( $r^2 = 0.67$ ) changes in net offshore position are mostly driven by national banks.



**Figure 5.** Relationship between secrecy, regulation and tax haven status, and market share growth of national banks (percent of worldwide cross-border assets) from Basel to the crisis (1988–2007). Countries labeled by ISO code. See Appendix A for details of definitions and methodology.

The pre-crisis market share growth of European ‘offshore’ or ‘midshore’ national banks (hereafter simply ‘offshore’ national banks) was even more pronounced among the world’s largest banks. Table 1 shows the world’s top-20 banks by assets in 1980, 1990, 2001 and 2007. In 1980, among all European offshore national banks, only two British banks made the top-20 list. These accounted for 9% of top-20 bank assets in 1980, putting British banks behind those from France, Japan, Germany and the USA. In 2007, however, British banks dominated the top-20 list, accounting for more than a quarter of the list’s total assets. Meanwhile, Swiss, Dutch, and Belgian banks increased from zero to four entries on the list (five prior to the mid-2007 acquisition of Dutch ABN-AMRO by Belgian Fortis and British RBS), with Britain, Switzerland, and (pre-ABN Amro takeover) the Netherlands ranking #1, #2 and #3 for top-20 bank asset share increase from 1980 to 2007. Together, the large European offshore national banks accounted for 42.5% of top-20 bank assets in 2007. This was almost as large as the 47.3% combined share of banks from Japan, Germany, France and the USA, which had a combined GDP 5 times larger.

The rapid market share growth of European offshore national banks was largely driven by mergers and acquisitions (M&As)—visible in Figure 3 as discontinuous growth through steep jumps.<sup>8</sup> Ultimately, this reflected a sorting process wherein the headquarters of combined banking groups gravitated toward jurisdictions with home-state-specific tax, regulatory, and other advantages (Valkanov and Kleimeier, 2006; Focarellia and Pozzolo, 2008; DeYoung et al., 2009; Pasiouras et al., 2011).

Figure 5 provides a rough assessment of the likely importance of home-state-specific capital regulatory, corporate taxation, and secrecy characteristics in driving the growth of European offshore national banks between the 1980s and the global financial crisis. Importantly, tax and regulatory advantages are defined from a strictly home state standpoint, which for taxation means an emphasis on controlled foreign corporation (CFC) rules and tax system territoriality, and for banking regulation means exclusively examining home state consolidated capital supervision (see Appendix A for a detailed breakdown of characteristics used to classify countries as full or partial regulatory, tax or secrecy

8 Half of Switzerland’s Figure 3 increase appears to be from acquisitions of US investment banks in 1990 (First Boston) and 2000 (Kidder Peabody, Paine Webber, Donaldson Luftkin Jeanette). Half of Ireland’s increase comes from Depfa’s 2002 move from Germany to Dublin. The 1996–2001 spike in Dutch and Belgian growth coincides with numerous acquisitions by ABN Amro, ING, Dexia and Fortis (see Abraham and Van Dicke 2002).

havens). The sample of countries reporting data to the BIS on bank assets by nationality over this period is too small (19 including counterparty-based estimates for Iceland and Cyprus<sup>9</sup>) to permit useful multivariate disaggregation of the role of these factors in driving offshore national bank growth.<sup>10</sup> However, the simple bivariate plots and regressions in Figure 5 suggest (tentatively) that European offshore national bank growth was likely encouraged, as would be expected, by a combination of light home state corporate taxation and permissive home state capital supervision. Meanwhile, financial secrecy does not appear to be systematically associated with national bank growth.

Interestingly, this analysis finds corporate tax haven status to be the factor most strongly associated with pre-crisis offshore national bank growth. Notably, Ireland, the Netherlands, Switzerland, and (to a lesser extent) the UK are all popular jurisdictions for corporate tax inversions, whereby firms (particularly but not exclusively American; see Marian, 2015) relocate their headquarters to low tax jurisdictions. Figure 4 and Appendix A suggest that this logic of home-state-level corporate tax arbitrage likely encouraged the rapid pre-crisis expansion of these countries' national banks—particularly via international M&As. Notably, the three sample countries with the lowest headline corporate tax rates—Iceland (18% rate), Ireland (12.5%) and Cyprus (10%)—had by far the fastest rates of pre-crisis national bank expansion (also see Appendix A). According to Engelen (2011), the Dutch SPV formation industry that had developed to serve multinational corporate tax avoidance also directly encouraged the expansion of Dutch banks into securitization activities that used the same basic vehicles.

Moreover, the analysis here indicates that lax home state capital supervision likely also encouraged European offshore national bank growth. In other words, the conventional logic of home-state-level corporate tax inversion appears to have operated in tandem with an additional logic of home-state-level bank regulatory inversion—keeping in mind that this mostly played out through piecemeal international M&A accretion (see Valkanov and Kleimeier, 2006), rather than overt bank redomiciliation (although the latter did sometimes occur; see below). Notably, as shown in Appendix A, the major European 'midshore' centers do in fact appear (with a few exceptions) to have 'won' the race-to-the-bottom in pre-crisis home-state capital supervision. Two key indicators of pre-crisis (2007/2008) home capital supervision are shown in Appendix A: (i) bank 'simple' leverage ratios (i.e. unadjusted for self-assessed asset risks, and including off-balance sheet exposures),<sup>11</sup> and (ii) the systemic impact (in relation to shareholder equity) of crisis-implicated securities repackaging activities on national banking systems, and absence of regulatory restrictions on capital arbitrage via these activities (see Appendix A). Out of 19 sample countries, eight—Switzerland, Belgium, the Netherlands, the UK, Germany, France, and Sweden—were substantially worse than the others in terms of leverage, with most of their largest banks more precariously leveraged in 2007 than the most fragile US investment bank, Bear Stearns (which had a leverage ratio of 2.7%). Meanwhile, six countries—Switzerland, Belgium, the Netherlands, the UK, Germany, and the US—were outstanding

9 For the purposes of the rough analysis here, using log-transformed asset growth, it is sufficient to know that Icelandic and Cypriot bank growth was exceptionally high (at least several hundred percent).

10 Time series panel analysis is unlikely to help due to the infrequency of national offshore characteristic change events, and firm-level analysis would mostly just obscure the home state sampling problem (and is an undertaking beyond the scope of this article).

11 See Mariathasan and Merrouche (2012) for discussion of leverage and capital ratio manipulation. In our analysis, 'dangerous' pre-crisis leverage is defined based on post-crisis Basel III rules (3% leverage ratio).

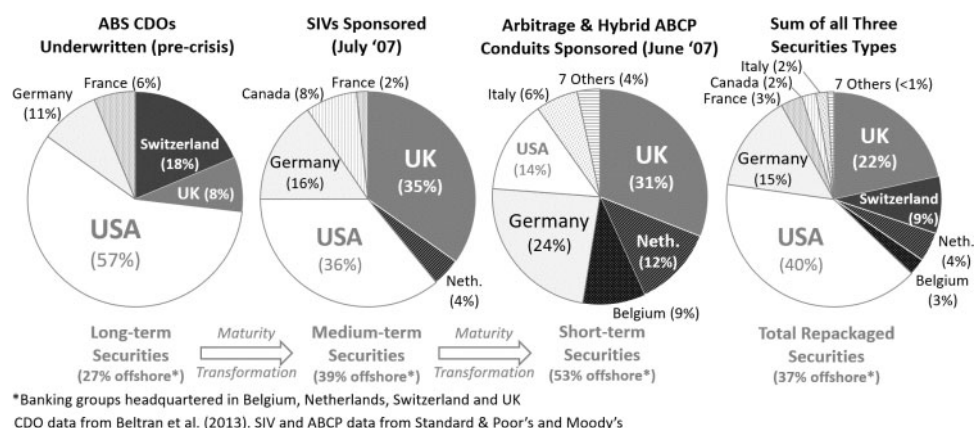
in terms of the systemic impact of securities repackaging activities on national banking systems (and in the case of Belgium, the Netherlands, the UK and Germany the lack of restrictions on flagrant capital arbitrage via Asset-Backed Commercial Paper (ABCP) conduits; see Thiemann, 2014). Of the five countries scoring very poorly on both indicators—Switzerland, Belgium, the Netherlands, the UK, and Germany—all but Germany can be described European ‘offshore’ jurisdictions.

Neither Ireland nor Iceland performed poorly on paper in these two core indicators—apart from Ireland’s largest bank, Depfa, whose leverage ratio reportedly reached a staggeringly fragile 0.83% in 2005 (Duebel, 2013). However, they can be classified as home capital regulatory havens based on a well-documented litany of acute regulatory lapses, which were mostly either a part or byproduct of efforts to boost international bank competitiveness (Benediktsdottir et al., 2011; Connor et al., 2012; Stewart, 2013). The most egregious was the failure (highlighted in Appendix A) of both countries’ regulators to prevent banks from manipulating their capitalizations through loan-funded purchases of their own and each-others’ equity (directly or via related parties; Benediktsdottir et al., 2011; Connor et al., 2012). In Iceland, as much as 70% of bank core capital was an illusory product of this behavior, with ‘weak capital the key to rapid expansion’ (Benediktsdottir et al., 2011). Meanwhile, the clearest demonstration of Ireland’s regulatory laxity is the fact that its largest bank, Depfa, was in fact a bank from Germany—which as noted above already had highly permissive home capital supervision—whose headquarters was lured to Dublin in 2002 with the promise of even greater regulatory permissiveness and lower taxes (Duebel, 2013; Stewart, 2013). This ‘naked’ tax and regulatory inversion doubled the cross-border assets of ‘Irish’ national banks overnight (Figure 3).

The low scores of the large European offshore centers on home state capital regulatory metrics, and the fact that this likely helped their national banks to expand international market share, suggests a new twist in the debate over the responsibility of offshore jurisdictions for the crisis (Palan et al., 2010; Shaxson, 2011; Haberly and Wójcik, 2017). What is especially striking is the intensity of these countries’ banks’ involvement in the riskiest securities repackaging<sup>12</sup> activities at the heart of the financial crisis (see FCIC, 2011; Pozsar et al., 2012). As shown in Figure 6, the combined share of British, Swiss, Dutch and Belgian financial institutions in the three most important repackaging segments—asset-backed securities (ABS) CDOs, SIVs, and credit arbitrage and hybrid ABCP conduits—was approximately the same as financial firms from the US (37% versus 40%), which had a GDP 3 times larger than these countries combined. Swiss banks were the second largest pre-crisis underwriters of CDOs after American banks, with a market share larger than the next two countries combined. Moreover, the market share of offshore national banks increases as one moves toward activities in the right side of the figure—reaching 53% for credit arbitrage and hybrid ABCP—which entail increasing direct balance sheet risk for sponsors (and their home states) due to the shorter maturities involved, and liquidity support required (FCIC, 2011; Pozsar et al., 2012). Crucially, Figure 6 captures off-balance sheet instruments that may not be fully represented in other datasets (e.g. from the BIS). This suggests that the overall pre-crisis market share growth of European offshore national banks—taking into account these instruments—may have been even more pronounced than indicated by Figures 3–4 and Table 1.

12 Off-balance sheet securitization vehicles whose assets are also securities.





**Figure 6.** Market shares of firms by nationality in pre-crisis underwriting and sponsorship of securities repackaging activities.

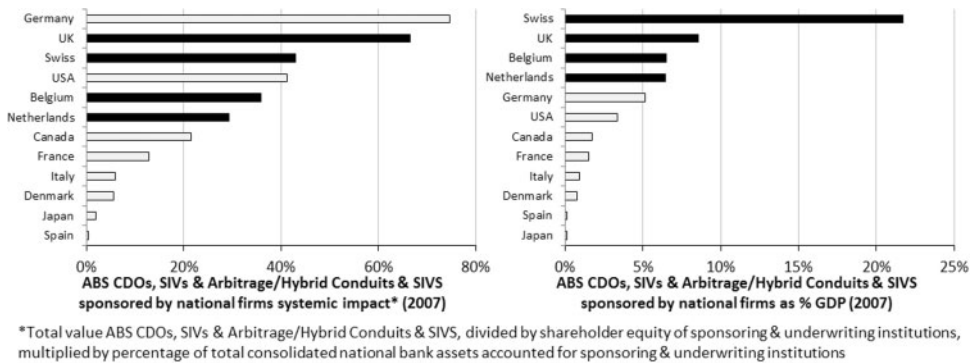
CDO data from Beltran et al. (2013). SIV and ABCP data from Standard & Poor's and Moody's.

\*Banking groups headquartered in Belgium, the Netherlands, Switzerland and the UK.

The irony of European offshore national bank involvement in shadow banking was that the origins and conduct of these activities were, from a territorial standpoint, mostly American. In this sense, even as European offshore national banks shifted in the 1990s and 2000s toward specialization in home-state tax and regulatory advantages, the Wall Street securities market partially usurped the traditional 'offshore' role of facilitating *host*-based regulatory avoidance (see FCIC, 2011; Haberly and Wójcik, 2017). To be fair, traditionally 'offshore' London (and its spinoff securities market in Dublin) also had a leading position in shadow banking, from a host territorial standpoint, as one pole of the so-called 'NY-LON' axis. However, London was increasingly a twin of Wall Street, that specialized in importing and adapting American financial products to Europe, rather than a place where American banks went to do things they could not do at home (Wójcik, 2013b).

In fact, as shown in Appendix B, the large shadow banking market shares of European offshore national banks appear to be largely explained by their aggressive acquisition of American and British securities firms in the 1990s and early 2000s. This suggests a logic of vertical integration (including internally within the UK) between European offshore state home capital regulatory failure, and 'NY-LON' host financial innovation and governance failures. Remarkably, by 2007, Swiss banks had purchased a quarter (5/20) of what had been the largest US investment banks in the 1980s (by M&A advising). Meanwhile, of the eight 1982 London accepting houses (investment banks) that had come under foreign ownership by 2007, half were owned by Swiss, Dutch, Belgian and Icelandic banks. Icelandic Kaupthing's 2005 purchase of Singer and Friedlander is particularly notable, as the latter's London-based activities directly precipitated the former's failure (Baldursson and Portes, 2014). In all, European offshore national banks (including British banks) accounted for 60% (9/15) of pre-crisis foreign ownership of what had been the leading US and British investment/merchant banks in the 1980s.

Ultimately, where European offshore national banks were most outstanding was in the intensity of the risks they concentrated on their home states. This is highlighted in Figure 7. The left side shows the estimated systemic impact of securities repackaging activities (listed in Figure 5) on national banking systems (i.e. in relation to bank assets;



**Figure 7.** Total pre-crisis underwriting and sponsorship of repackaged securities by firm nationality by systemic impact on national banks (left) and as a % of home country GDP (right). See Appendix A for methodological details.

\*Total value ABS CDOs, SIVs and Arbitrage/Hybrid Conduits and SIVs, divided by shareholder equity of sponsoring and underwriting institutions, multiplied by percentage of total consolidated national bank assets accounted for sponsoring and underwriting institutions.

see Appendix A). By this indicator, Germany actually exhibited greater home supervisory dereliction in relation to shadow banking than the four largest European offshore centers' banks. However, the right side shows the value of securities repackaging activities as a percent of bank home state GDP. By this measure, Switzerland, the UK, the Netherlands and Belgium easily top the scale.

#### 4. The global financial crisis and the end of the great inversion

By the eve of the global financial crisis, the old 'offshore' misalignment in international banking—between the nationality of banks and the territory in which they booked their operations—had been partially superseded by a new misalignment between the size of European offshore national banks, and the size of their home economies, which we dub the 'Great Inversion'. The table in Appendix C shows the severity of this new misalignment in 2007. Most extreme was the overgrowth of Iceland's three largest banks, with assets equal to 741% of Iceland's GDP. Switzerland's top three banks were only slightly less distended, with a collective asset to GDP ratio of 687%, while the top three banks of Belgium, the Netherlands, Ireland, Cyprus and the UK had assets greater than 250% of GDP.

From a purely political standpoint, this new 'inverted' geometry of offshore banking misalignment was in some respects more viable than the traditional logic of Euromarket regulatory arbitrage. Specifically, with primary responsibility for bank supervision now in the hands of the same home state capital supervisors with de facto responsibility for backstopping banks, the new architecture was not beset with the unlimited moral hazard—and consequent seeds of onshore regulatory backlash—of the pre-1980s Euromarket. Indeed, as can be seen in Appendix C, offshore and onshore home states alike typically bore sole responsibility (with some exceptions) for recapitalizing their own national banks. However, this same concentration of sovereign backstopping liability in the hands of European offshore states—whose GDP was in some cases smaller than the balance sheets

**Table 2.** Determinants of change in cross-border assets of banks by nationality, Q4 2007–Q4 2012

	Combined sample: dependencies and independent		Split sample: independent countries only						local forex liability data	
	39	39	33	33	33	33			19	19
Variables (values for Q4 '07)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8		
All X-border Liabilities/GDP	−0.040	−0.11***	−0.11***	0.15						
Net X-border Foreign Currency Liabilities <sup>a</sup> /GDP				−0.27***	−0.13***	−0.065**	−0.065**			
Dependency dummy		−0.59***								
All X-border Liabilities/GDP × Dependency dummy		0.27***								
Euro member X-border Euro liabilities/GDP						−0.30***	−0.29***	−0.19**		
Foreign currency (x-border and local) and all Euro Liab <sup>b</sup> /GDP								−0.042**		
Adj. $r^2$	0.004	0.32	0.30	0.42	0.40	0.61	0.75	0.76		

All models use Ordinary Least Squares regression, where dependent variable is log (2012 x-border bank assets by nationality/2007 x-border bank assets by nationality).

All independent variables only include cross-border liabilities.

<sup>a</sup>Includes Eurozone member Euro-denominated cross-border liabilities (reported or estimated).

<sup>b</sup>Includes all (estimated) Euro-denominated liabilities, cross-border and local, of both Eurozone and non-Eurozone member banks.

\*\*Significant at 5% level.

\*\*\*Significant at 1% level.

Source: BIS locational banking statistics; World Bank WDI; ECB (details in online supplemental datatable 3).

of individual national banks—raised the prospect that banks might not only be ‘too big to fail’, but also ‘too big to save’ from the standpoint of these states.

Importantly, the extent to which banks are ‘overextended’, in relation to home state backstopping capacity is not simply determined by bank size in relation to GDP, but also the currency denomination of bank liabilities. Table 2 probes the impact of this through regression modeling of post-global financial crisis (Q4 2007–Q4 2012) change in the cross-border assets of banks by nationality. The first independent variable is simply total cross-border liabilities of national banks in Q4 2007 as a percent of home country GDP. Meanwhile, the other variables test the impact of bank liability currency denomination. Central banks have a theoretically unlimited capacity to backstop the own-currency liabilities of both banks and the sovereigns supporting these banks. Consequently, foreign currency-denominated bank liabilities should be more harmful to crisis resilience than own-currency liabilities (Buiter and Sibert, 2011). In practice, however, this is complicated by additional factors. During the crisis, foreign currency funding pressures were alleviated by inter-central bank swap lines, and central bank liquidity support to foreign bank offices within their jurisdiction. The Federal Reserve was particularly generous in backstopping the dollar liquidity of foreigners (McDowell, 2011; Helleiner, 2014). Furthermore, states can ‘self-insure’ against foreign currency funding problems by accumulating sovereign

**Table 3.** Nationality of Top 20 World Banks by Assets, 2007–2019

2007			2012			2019			2007–2019	
	#	Asset %		#	Asset %		#	Asset %	Asset % Chg.	
UK	4	26.6	China	4	21.1	China	4	35.3	China	32.2
France	3	16.9	France	4	19.3	USA	4	19.1	Japan	6.0
US	3	14.6	UK	3	16.5	France	4	16.2	USA	4.5
Switz.	2	8.6	USA	3	14.9	Japan	3	13.6	Spain	0.1
Germ.	1	7.9	Japan	3	14.6	UK	2	8.7	France	−0.7
Japan	2	7.6	Germ.	1	6.1	Spain	1	3.6	Belg.	−3.0
Italy	1	4.0	Spain	1	3.9	Germ.	1	3.4	Italy	−4.0
Neth.	1	3.9 (7.9) <sup>a</sup>	Neth.	1	3.6				Germ.	−4.6
Spain	1	3.6							Neth.	−3.9 (−7.9) <sup>a</sup>
China	1	3.2							Switz.	−8.6
Belg.	1	3.0							UK	−17.9
UK, CH, NL, BE	6	42.1	UK, CH, NL, BE	4	20.0	UK, CH, NL, BE	2	8.7	UK, CH, NL, BE	−33.4

<sup>a</sup>Figure in parentheses estimated value for Dutch national bank groups before RBS (UK), Fortis (BE) and Santander (ES) purchase of ABN Amro (NL) in late 2007.

Source: Global Finance.

wealth funds and foreign exchange reserves (Aizenman and Lee, 2007). Finally, the European Central Bank (ECB) is banned from acting as a sovereign lender of last resort to Eurozone states, meaning that their banks' own-currency liabilities are more akin to foreign currency liabilities once a crisis moves them onto the state's actual or assumed de facto balance sheet (De Grauwe and Ji, 2013). Complicating matters has been the Eurozone's ad hoc development of sovereign lender-of-last-resort-like workarounds (Buiter and Rahbari, 2012).

The impact of bank liability currency denomination is probed through two variables. The first is 2007 'foreign currency exposure'—i.e. the cross-border foreign currency-denominated liabilities of all national banks, minus sovereign foreign exchange reserves, as a percent of home country GDP. The Euro-denominated liabilities of all countries' banks, including Eurozone members, are treated as foreign currency for this variable. However, Euro-denominated liabilities of Eurozone member banks are also included as a second variable, allowing for the disaggregation of their impact from that of 'true' foreign currency liabilities. Finally, politically-dependent jurisdictions are disaggregated from independent countries (via dummy and interaction terms in Model 2, and sample division in Models 3–6) to account for the formal or tacit fiscal backstops the former enjoy from colonial patrons (e.g. the 2009 UK bailout of the Caymans Islands).

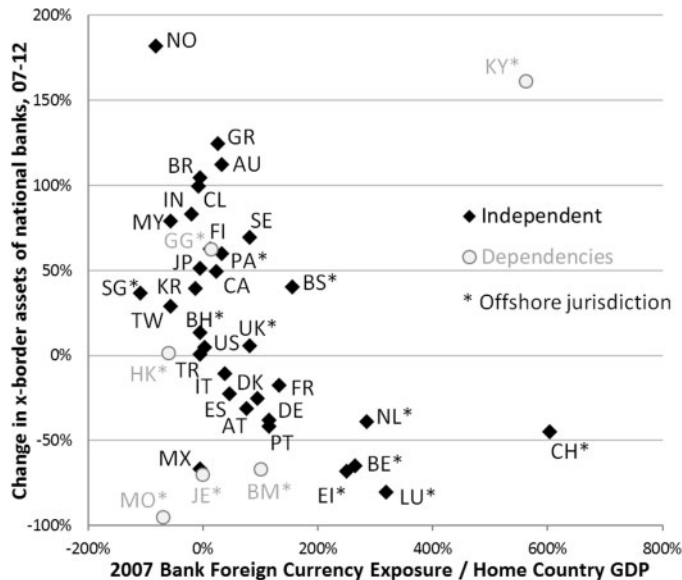
Due to the limited sample of BIS-reporting countries, only a small number of variables can be tested simultaneously. Furthermore, the results should be treated with some caution due the necessity of estimating foreign currency liabilities by nationality from foreign currency liabilities by residence for a number of jurisdictions (fully for 14, and partially for 4, of 39). However, they are nevertheless intriguing. First, the simple cross-border

liabilities/GDP variable strongly predicts post-crisis international bank retrenchment, but only for independent countries rather than dependent jurisdictions (evidenced by the variable's significance in Models 2 and 3 but not 1; also see Figure 4). This highlights the extent to which politically dependent offshore jurisdictions free-ride on the explicit or implicit backing of 'big brother' (Hampton, 1996)—keeping in mind that none of these dependent jurisdictions (e.g. UK territories) was important sites for pre-crisis national bank growth. The second key finding is that foreign currency (including Eurozone-member Euro) liabilities are not simply more harmful to national bank resilience than own-currency-denominated liabilities, but that the latter are not harmful at all (Model 4). This underscores the shock-absorbing 'money printing' capacity of central banks in relation to national own-currency denominated liabilities. Given that central bank liquidity support to banks was quite cosmopolitan, it also appears to highlight the importance for banking stability of the more narrowly nationalistic logic of central banks' sovereign lender of last resort support.

Finally, the results show that the Eurozone was exceptionally toxic to large banking groups headquartered in small economies. As can be seen in Model 6 (which explains 61% of post-crisis bank asset change), the Euro-denominated cross-border liabilities of Eurozone member banks were actually worse than *foreign currency* denominated liabilities in terms of their impact on post-crisis bank stability. One possible explanation is that unlike other countries' banks, all of the domestic liabilities of Eurozone banks are also effectively foreign currency liabilities for which there is no sovereign lender of last resort. However, Model 8, which adjusts foreign currency exposure to include all cross-border and (estimated) local liabilities of Eurozone member banks, and the local foreign currency liabilities of non-Eurozone member banks (for countries with available data), indicates that this only partially explains the Eurozone's toxicity to bank stability. This suggests that the Eurozone's ad hoc sovereign lender of last resort workarounds were not only effectively useless (corroborating De Grauwe and Ji, 2013), but actually may have amplified the fall-out of the crisis via self-defeating austerity programs, and investor uncertainty generated by international political wrangling. This provides important contextualization for the severity of the bank-driven sovereign debt crises in Ireland and Cyprus.

Notably, whether the process of European offshore national bank retrenchment translated into relatively severe as opposed to mild national fiscal pain appears to have been conditioned by substantial country-level contingency. This can be seen in Figure 8, which plots the relationship (Model 5 in Table 2) between 2007 'foreign currency exposure' and 2007–2012 change in cross-border bank assets, illustrating the post-crisis rebalancing of the misalignment between international bank size and home state backstopping capacity. What is particularly interesting is that the Eurozone offshore jurisdictions (with available data)—Ireland and the Benelux countries<sup>13</sup>—are clustered closely together in the lower right corner of the figure, indicating extreme pre-crisis currency exposure, and correspondingly pronounced post-crisis retrenchment. Crucially, both Ireland and the Benelux Countries had their most problematic international banks—Irish Depfa, Dutch ABN Amro and Belgian Fortis—fortuitously come under foreign ownership immediately prior to or in the early stages of their failure (see Appendix C). Belgium—the pre-crisis assets of whose top three banks, all of which failed, were 534% of GDP (compared to 305% for Ireland)—was particularly fortunate, as France helped rescue both Fortis, via its

13 Cyprus is omitted due to a lack of data on bank asset change by nationality.



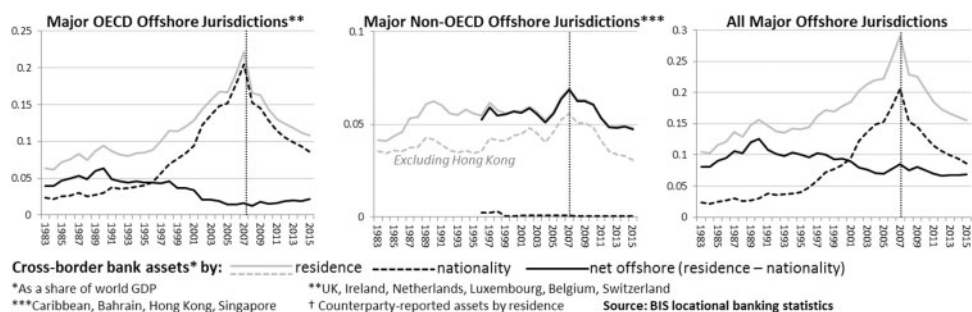
**Figure 8.** Net cross-border foreign currency exposure of national banks in Q4 2007, and change in cross-border assets of national banks from Q4 2007 to Q4 2012. Countries labeled by ISO code.

acquisition by BNP Paribas, and Dexia, via a highly unusual transnational capital injection (reflecting Dexia's dual nationality). With the most troubled international banks of all of these states fully or partially removed from their contingent sovereign balance sheets, Ireland seems to have been left in relatively worse shape due to the Irish real estate crash's impact on its remaining, more domestically-oriented banks.

The peculiar crisis experience of Eurozone offshore national banks—both in terms of the ECB's exceptional failure as a sovereign lender of last resort, and the 11th hour musical chairs of bank nationality shifts—raises questions about what could have been, either for better or worse, for Eurozone offshore centers with large national banks. Ultimately, however, as shown in Table 3 (and Figure 3), the days when some of the world's largest banks were based in economies far smaller than these banks have now come to an end. No country whose banks appeared on the 2019 top 20 list of world banks by assets (Table 3) had a GDP smaller than \$1 trillion, and only one, Spain, had a GDP smaller than \$2 trillion. Furthermore, as shown in Figure 9, post-crisis offshore bank retrenchment is even more pronounced when cross-border assets are viewed in relation to world GDP, as this retrenchment has been amplified, in absolute terms, by a decline in worldwide cross-border bank assets as a percent of world GDP.

## 5. Conclusion: the political geographic paradox of offshore banking

In this article, we have presented a novel analysis of the evolution of offshore banking from the 1980s to global financial crisis. We have shown that the traditional model of offshore Euromarket banking was subjected to a structural squeeze for three decades prior to the global financial crisis. Specifically, the combination of widespread international deregulation in traditional territorialized areas of banking regulation, and the construction of



**Figure 9.** Cross-border bank assets of major offshore jurisdictions as a percent of world GDP, 1983–2015.

\*As a share of world GDP.

\*\*UK, Ireland, the Netherlands, Luxembourg, Belgium, Switzerland.

\*\*\*Caribbean, Bahrain, Hong Kong, Singapore.

†Counterparty-reported assets by resident.

Source: BIS locational banking statistics.

a new home-state centered capital regulatory regime under Basel, reduced the advantages for ‘onshore’ banks of booking conventional deposit-taking and lending offshore. Meanwhile, the logic of this new regulatory configuration encouraged the rise of shadow banking regulatory arbitrage that exploited gaps in home state consolidated capital rules. Between the 1980s and the global financial crisis, this change in the logic of banking regulatory arbitrage prompted a geographic and functional reorganization of the global offshore banking system. This entailed ‘small island’ jurisdictions increasingly becoming platforms for securitization vehicles, while large European ‘midshore’ jurisdictions increasingly specialized in providing home-state-specific tax and capital regulatory advantages to their own national banks as sponsors for these activities—thus encouraging a substantial percentage of the international banking system to be shifted, through mergers and acquisitions, to the ownership of these banks. The result of this ‘Great Inversion’ was the emergence, by the global financial crisis, of an unsustainable new offshore banking misalignment between the size of these overgrown European offshore national banks, and the backstopping capacity of their home states. Following the shock of the crisis, this edifice came crashing down.

Notably, the lessons of this experience appear to have, at least temporarily, been learned. A key consideration in HSBC’s recent decision not to move to lightly taxed Hong Kong seems to have been the fear that its dollar liabilities were too big for Hong Kong to backstop even with its foreign reserves (The Economist, 2016). Meanwhile, the Netherlands has rebuffed Swedish Nordea’s interest in inverting to Dutch nationality, to lower its capital regulatory and tax burden, by merging with ABN Amro. As one analyst put it:

[the Dutch government] would never allow ABN Amro to merge with a foreign bank looking to flee its own regulatory regime...The Netherlands has barely recovered from ABN Amro’s last adventure with banks from abroad. (De Jong, 2016)

Ultimately, our findings suggest that states such as Ireland, Iceland and Cyprus were merely the most visible causalities of a political–geographic paradox that makes offshore

banking center development largely unsustainable, over the long-run, under either a host or a home-based international banking regulatory regime. On the one hand, when international banking regulation is dominated by host states, ‘offshore’ hosts have substantial regulatory leverage to attract the operations of foreign banks backstopped by foreign governments. However, the moral hazard entailed by the fact that onshore states are forced to absorb the costs of offshore bad behavior, means that such a host-state-dominated pattern of banking regulation is politically precarious, over the long-run—as it is likely to generate an onshore regulatory backlash that undermines the scope for offshore hosts to attract business. Conversely, an ‘inverted’ paradigm of offshore national bank development fostered by home-state-dominated regulation is more politically stable from an international standpoint, as offshore states are mostly forced to internalize the costs of the regulatory laxity they employ to support national bank competitiveness. However, this same offshore internalization of bank backstopping costs, within states with a limited capacity to underwrite these costs, makes such an arrangement structurally unstable in the event of a financial crisis.

Notably, however, offshore centers do not appear to be wholly without options for navigating this paradox. Most strikingly, a new pattern of ‘offshore state capitalism’ appears to be developing in Asia as a sort of dialectical synthesis that resolves both prongs of the paradox—with Singapore and Hong Kong showing the only substantial post-crisis banking market share growth among offshore banking centers in Figure 3. On the one hand, these jurisdictions self-insure against financial shocks through foreign exchange reserve and sovereign wealth fund accumulation (Aizenman and Lee, 2007; Clark and Monk, 2010). On the other hand, the onshore–offshore political relationship is stabilized by direct Chinese state patronage, with the latter’s state-owned banks playing the leading role in fostering the development of the offshore RMB market (Walter and Howie, 2011; Hall, 2018). Ultimately—as observed by Polanyi for economic liberalization generally—the fate of the offshore ‘liberation’ of markets from the reach of the state appears to be, paradoxically, to drive an expanding role of the state in supporting and operating these markets.

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## Conflicts of interest

Neither of the authors has any conflicts of interest in relation to this work.

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## Appendices

### Appendix A. Selected characteristics of major OECD and EU offshore jurisdictions

		Tax, secrecy and reg. havens		Primarily tax and regulatory havens				Primarily tax and secrecy havens			'Onshore' comparison jurisdictions				
		CH	BE	NL	IE	IS	UK	CY	LU	AT	US	DE	FR	IT	JP
Corporate Tax		Yes	Yes	Yes	Yes	Yes	Part <sup>a</sup>	Yes	Yes	Part <sup>b</sup>					
Haven		21%	34%	25.5%	12.5%	18%	30%	10%	30%	25%	40%	38%	33%	37%	41%
'07 CIT < 20%		Yes	Yes	Part <sup>c</sup>	Part <sup>d</sup>			Yes	Yes	Part <sup>c</sup>					
No CFC rules + territorial		134%	104%	255%	125%	71%	100%	834%	3371%	65%	17%	29%	41%	18%	15%
'09 FDI > GDP		3		4	8		1								
US Inversions ( <sup>'82–'07</sup> )		Yes	Yes					Yes	Yes	Yes	Del. <sup>f</sup>				
Secrecy haven		100%	73%	58%	62%		42%	75%	87%	91%	92%				
'09 FSI > 70%		Yes	Yes					Yes	Yes	Yes					
Savings Dir. Opt-Out		Yes	Yes						Yes	Yes					
Regulatory Haven <sup>e</sup>		Yes	Yes	Yes	Yes <sup>h</sup>	Yes <sup>h</sup>	Yes				CSEs <sup>i</sup>	Yes	Part		
Leverage ratio	#1 Bank	UBS	Fortis	ING	Depfa	Kaup	RBS	BOC	BCEE	Erste	Citi	DB	BNP	UC	Miz.
<3% in '07	by assets	<2%	2–4%	<3%	<2%	>5% <sup>h</sup>	<3%	>5%	>6%	3–4%	2–4%	<2%	<3%	>3%	>3%
	#2 Bank	CS	Dexia	ABN	AIB	LB	Barc.	Laiki	Raiff	Raiff	BOA	CB	CA	IS	MUFJ
	by assets	<3%	<3%	<3%	>4%	>5% <sup>h</sup>	<3%	>5%	ND	>6%	>4%	<3%	<3%	>4%	>4%
	All banks lev. ratio <4% (EU)		2.9%	3.2%	4.5%		3.7%	7.3%	6.3%	5.2%		2.7%	3.8%	7.2%	
CDOs, ABCP and SIVs	>25% bank equity ('07)	100%	45%	33%			66%				63%	106%	29%	14%	13%
	Systemic impact ('07)	43%	36%	29%			66%				41%	79%	13%	6%	2%
	No ABCP capital charge		Yes	Yes			Yes				No	Yes	No	Yes	
	Banks fund own equity				Yes	Yes									
Offshore dependencies				1			9				1				
Net offshore intl. banking position, 1988		Yes	Yes	Yes		ND	Yes	ND	Yes						
National bank market share growth '88–'07		267	196	223	1316	895 <sup>j</sup>	174	1272 <sup>j</sup>	91	–1	–31	136	80	–6	–72

'07 CIT < 20%: 2007 Corporate Income tax rate below 20%. *Source*: KPMG (2017).

No CFC + Territorial: Territorial corporate taxation system combined with lack of controlled foreign corporation rules (gives national firms total or near-total exemption of from home state taxation of foreign-source profits, including profits that are aggressively sheltered from host state taxation; see EC, 2015). *Source*: EC (2015) and Deloitte Taxation and Investment Guides and Country Highlights.

'09 FDI > GDP: Total outward foreign direct investment larger than gross domestic product in 2009 (first year with available IMF CDIS data).

US Inversions ('82-'07): Number of US firms moving headquarters to jurisdictions via inversions through 2007. *Source*: Bloomberg (2017).

'09 FSI > 70%: Opacity score of greater than 70% in 2009 Tax Justice Network Financial Secrecy Index (first available year).

Savings Dir. Opt Out: Jurisdictions complying with Savings Directive by levying withholding tax rather than sharing taxpayer information.

Leverage ratio < 3%: Largest and or second largest bank in country by 2007 assets had a leverage ratio smaller than 3% (i.e. would have been noncompliant with post-crisis Basel III leverage standard). Approximate ranges are given based on authors' calculations from Bankscope and a number of secondary sources, to reflect fluctuation over time and variation stemming from source and methodological details.

All Banks Lev. Ratio < 4%: Total leverage ratio of banking system < 4 % in 2008 (earliest date of data availability from ECB). EU member only. *Source*: ECB Consolidated Banking Data.

CDOs, ABCP and SIVs > 25% bank equity ('07): Total value of ABSs Collateralized Debt Obligations (CDOs), credit arbitrage and hybrid ABCP conduits and SIVs > 25% of the shareholder equity of national banks involved in sponsoring/underwriting these vehicles. Captures the potential risk posed by all major forms of pre-crisis securities repackaging for the banks involved in these activities. CDO data from Beltran et al. (2013). SIV and ABCP data from Standard & Poor's and Moody's. Shareholder equity data from Bankscope and company reports.

CDOs, ABCP and SIVs systemic impact ('07): Multiplies percentage in previous row by percentage of total consolidated national banking system assets (estimated from ECB and BIS data) accounted for by banks directly involved in securities repackaging. Gauges potential systemic risk of securities repackaging activities to the national banking system as a whole rather than only to banks directly involved in repackaging.

No ABCP capital charge: Jurisdictions did not apply any capital charge to bank liquidity support lines to ABCP conduits prior to 2007/2008 Basel II phase-in (effectively allowed unlimited movement of assets into off-balance sheet vehicles). From Thiemann (2014).

Banks fund own equity: Pre-crisis bank capitalizations artificially inflated (and apparent leverage depressed) through equity purchases funded by loans from banks themselves (or among each other).

Offshore dependencies: Number of overseas dependencies/territories of country ranked on 2009 Tax Justice Network Financial Secrecy Index.

Net offshore intl. banking position, 1988: Q4 1988 Cross-border bank assets by residence exceeded cross-border assets by nationality.

National Bank Market Share Growth '88-'07: Q4 2007 cross-border asset share by bank nationality divided by Q4 1988 share.

ND: No data.

<sup>a</sup>UK has been a major corporate tax haven since 2010 Tory tax changes (e.g. 10 US corporate inversions 2010–2017). Difficult to classify pre-2010; central hub of global tax haven network (current and former dependencies), and widely used as offshore FDI conduit.

<sup>b</sup>Minor role as FDI conduit jurisdiction.

<sup>c</sup>The Netherlands has CFC rules, but these are largely overridden in practice by participation exemption.

<sup>d</sup>Ireland operates worldwide taxation system but has no CFC rules.

<sup>e</sup>Austria has no CFC rules, but has alternate rules serving similar purpose.

<sup>f</sup>US secrecy haven status at state level (mostly Delaware; also Wyoming, Nevada).

<sup>g</sup>'Regulatory haven' here refers specifically to consolidated home-state capital supervision of nationally headquartered bank groups.

<sup>h</sup>See in-text discussion or Ireland and Iceland.

<sup>i</sup>US supervision of investment banks by Securities and Exchange Commission under Consolidated Supervised Entity (CSE) program was much weaker than supervision of commercial banks by Federal Reserve (see FCIC, 2011).

<sup>j</sup>National bank growth figures for Iceland and Cyprus are estimates based on counterparty-reported assets by residence.

**Appendix B.** Ownership in 2007 of largest 1980s US and British investment and merchant banks

Parent company, 2007		Top 20 US Investment Banks by M&A Advising, 1980–1991 (with acquisition date)	London Accepting Houses, 1982 (with acquisition date)	Total
Swiss	UBS	Kidder Peabody (2000), PaineWebber (2000) Dillon Read (1997)	S. G. Warburg (1995)	6
	Credit Suisse	First Boston (1990), Donaldson Lufkin and Jenrette (2000)		
US	Citigroup	Shearson Lehman Hutton (1998), Salomon Brothers (1998), Smith Barney Harris Upham (1998)		4
German	JP Morgan	Alex Brown and Son (1999), Bankers Trust (1999)	Robert Fleming (2000)	4
	Deutsche Bank		Morgan Grenfell (1990)	
British	Dresdner Bank		Kleinwort Benson (1995)	4
	HSBC		Samuel Montagu (1974)	
Dutch	Lloyds TSB		Charterhouse Japhet (2000)	1
	Investec		Hill Samuel (1987)	
Icelandic	ABN Amro		Guinness Mahon (1998)	1
	ING		Baring Brothers (US) (2001)	
Belgian	Kaupthing		Baring Brothers (1995)	1
French	KBC		Singer and Friedlander (2005)	1
Independent in 2007	Société Générale	Goldman Sachs, Morgan Stanley (incl. Dean Witter Reynolds), Merrill Lynch, Keefe Bruyette and Woods, Lazard, Shearson Lehman Brother, Bear Stearns, Financo	Brown Shipley (1992)	13
			Hambros (1998)	
Defunct			N M Rothschild and Sons, Shroders, Lazard, Lea Brothers	1
Total		Drexel Burnham Lambert		36
		20	16	

US Investment Bank M&A data from Rau (2000). London Accepting House list from Hablutzel (1992).

Appendix C. Assets of largest three national banks in Q4 2007 as a percent of GDP

Country	#1 Bank Q4 '07	% GDP	Recap. <sup>a</sup>	#2 Bank Q4 '07	% GDP	Recap. <sup>a</sup>	#3 Bank Q4 '07	Recap	% GDP	Top three % GDP
Iceland <sup>†</sup>	Kaupthing	394	Home	Landesbanki	226	Home	Glitner	Home	122	741
Switz.	UBS	423	Home, SWFs	Credit Suisse	253	SWFs	Julius Baer	—	11	687
Belgium	Fortis	239	Home, NL, LU, SWF	Dexia	186	Home, FR, LU	KBC	Home (Flan.)	109	534
Cyprus <sup>‡</sup>	Bank of Cyprus	214	Home	Marfin	203	Home	Hellenic	Home	49	466
Neth.	ING	176	Home	Rabobank	99	—	SNS	Home	12	287 (456) <sup>b</sup>
Ireland <sup>‡</sup>	Allied Irish	96	Home	Bank of Ireland	91	Home	Anglo Irish	Home	52	239 (305) <sup>b</sup>
UK	RBS	128	Home	Barclays	83	SWFs	HSBC	—	79	291
France	BNP Paribas	94	Home	Credit Agricole	85	Home	SocGen	Home	59	238
Sing.	DBS	91	—	UOB	69	—	OCBC	—	68	228
Spain	Santander	91	—	BBVA	49	—	Caixa	—	24	164
Germany	Deutsche Bank	87	—	Commerzbank	26	Home	Dresdner	Home	21	134
Lux.	BCEE	117	—	Raiffeisen	12	—	SNCI	—	3	131
Italy	Unicredit	68	Home	Intesa Sanpaolo	38	Home	Monte dei Paschi	Home	8	114
China	ICBC	45	—	Construction Bank	34	—	Agricultural Bank	Home	31	110
Canada	RBC	41	—	TID-Bank	29	—	Scotiabank	—	28	98
Japan	Mizuho	35	—	MUFJ	31	—	SMFG	—	25	90
USA	Citigroup	15	Home, SWFs	Bank of America	12	Home, SWFs	JP Morgan	Home	11	38

<sup>a</sup>Figures in parentheses indicate top three bank asset–GDP ratio for the Netherlands and Ireland prior to foreign bank acquisitions earlier in 2007 of ABN Amro and Depfa, respectively.

<sup>b</sup>Source of global financial or Eurozone crisis emergency capital injection (own home state, foreign sovereign wealth fund (SWF) or other non-home state government as indicated).